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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,059	06/06/2001	Erskine R. Barbour	ABMS-0122/B010420	7848

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EXAMINER

TERESINSKI, JOHN

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,059

Applicant(s)

BARBOUR ET AL.

Examiner

John Teresinski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 8, 10-16, 24-27 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 10-16, 24-27 and 38 is/are rejected.
- 7) ☒ Claim(s) 7 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 May 2003 has been entered.

Claim Objections

Claims 7 and 10 are objected to because of the following informalities: Claims 7 and 10 are dependent on canceled claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 24 recites the limitation "the series of modulated current pulses" in Line 11. There is insufficient antecedent basis for this limitation in the claim; it is not known where or what source is providing these series of pulses. Clarification is required.

Claims 25-27 are also rejected to as being dependent upon a rejected base claim 24.

For the purpose of examination, examiner has assumed there is a means of applying a series of modulated current pulses.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 38 is rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent No. 6,175,456 to Yun.

Regarding claim 38, Yun discloses a method for controlling a magnetic actuator comprising:

applying a first series of modulate current pulses having a first magnitude through the coil of the magnetic actuator (Abstract);

modifying the first magnitude of the first series of modulate current pulses (column 7 lines 65-67 and column 8 lines 1-4); and

applying a second series of modulated current pulses having a second magnitude through the coil of the magnetic actuator such that operation of the magnetic actuator is performed (column 8 lines 5-14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8,12,13,16 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,729,119 to Barbour in view of U.S. Patent No. 5,452,172 to Lane et al..

Regarding claim 8, Barbour discloses a power supply (column 6 lines 19-22), a microprocessor (column 4 lines 67-68) and at least one actuator drive circuit connected to a power switching device adapted to provide a series of modulated current pulses to the magnetic actuator within the power switching device (column 11 lines 34-38). Barbour does not disclose high voltage power distribution, the magnetic actuator connected to the power line in a high voltage electrical distribution system or a microprocessor for monitoring the series of modulated current pulses to determine whether to modify the magnitude of the modulated current pulses.

Lane et al. discloses a high voltage electrical distribution system (column 1 lines 45-47) including an actuator connected to the high voltage line (column 1 lines 63-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Barbour for high voltage use and connect the actuator to the high voltage line for the purpose of reducing system interruption to a minimum if a fault should occur in a high voltage distribution system (column 1 lines 8-13).

Yun disclose a microprocessor for monitoring the series of modulated current pulses to determine whether to modify the magnitude of the modulated current pulses (column lines). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a microprocessor to monitor the modulated current pulses as taught by Yun into Barbour

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for the purpose of adjusting current to the optimum state without modifying the hardware structure (column 1 lines 66-67, column 2 lines 1-3).

Regarding claims 12 and 13, Barbour discloses alternating and direct current power supplies (column 11 lines 5-7).

Regarding claim 16, Barbour discloses a controller housing (column 4 line 10) and an energy storage capacitor for storing energy to a magnetic actuator (column 5 lines 5-10 and column 13 lines 29-35).

Regarding claims 24-27, Barbour discloses applying voltage across a coil for a predetermined period of time (column 13 lines 62-67 and column 14 lines 1-12).

Claims 1-5, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbour as modified above and further in view of U.S. Patent No. 6,147,422 to Delson et al..

Regarding claim 1, Barbour discloses a method for controlling a magnetic actuator within a power switching device (column 5 lines 35-40), a coil and armature (column 6 lines 64-65) and the method/means for inputting a power signal, applying a series of modulated current pulses through the coil of a magnetic actuator (column 11 lines 34-38). Barbour as modified does not disclose applying modulated current pulses in a first direction such that the actuator moves from a first to a second position. Delson et al. discloses applying a modulated current pulses/modulated current signal in a first direction such that the actuator moves from a first to a second position (column 7 line 54, column 12 lines 65-67, column 13 lines 1-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the application of modulated current supply pulses/modulated current signal in a first direction to

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move an actuator from a first position to a second position as taught by Delson et al. into Barbour as modified for the purpose of controlling an actuator within a power switching device.

Regarding claims 2 and 3, Barbour as modified does not disclose current pulses through the coil in a second direction for the actuator to move from a second to a third position or the third position being the first position. Delson et al. discloses applying modulated current pulses in a second direction to the coil of a magnetic actuator and a third position as a first position (column 10 lines 38-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include applying current to the coil in a second direction and the third position as the first position as taught by Delson et al. into Barbour as modified for the purpose of moving the actuator in a reverse direction and returning the actuator to an original location.

Regarding claims 4 and 5, Barbour discloses measuring a current value in a coil while pulsing a coil (column 12 lines 1-6) and the continuation of current pulses to the coil of an actuator (column 10 lines 61-67) and comparing the current level with a threshold value (column 1 lines 50-52).

Regarding claim 11 Barbour discloses recloser/reset function (column 13 lines 53-57).

Regarding claim 14, Barbour as modified does not disclose three actuator control circuits. Delson et al. discloses the use of three actuator control circuits (column 9 lines 55-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the a three actuator control circuits as taught by Delson et al. into Barbour as modified for the purpose of controlling three actuators.

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Regarding claim 15, Barbour discloses a programmable power supply with a range of 12 to 200 VDC (column 11 lines 5-7). Barbour as modified does not include the range of 200-250 VDC. It would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the power supply range for the purpose of providing more power.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (703) 305-4746. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872 9319 for regular communications and (703) 872 9318 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JT
JT
June 30, 2003


JAY PATIDAR
PRIMARY EXAMINER